

DUTY PERFORMANCE BY THE AFROTC GRADUATE
AFTER HE HAS BECOME A RATED PILOT

by

DONALD RAYMOND CONARD
COLONEL U.S.A.F.

B. S., Kansas State College
of Agriculture and Applied Science, 1941

A THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Education

KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE

1957

LD
2668
T4
1957
C65
c.2
Documents.

TABLE OF CONTENTS

INTRODUCTION.....	1
PURPOSE	2
PROCEDURES	2
FINDINGS	3
SUMMARY AND CONCLUSIONS	12
ACKNOWLEDGMENT.....	16
APPENDICES.....	17

INTRODUCTION

The writer has been engaged in the pilot training program for approximately ten years of his career in the Air Force, in all capacities from Instructor Pilot to Commander of a Pilot Training Wing, and for the past three years has been Commander of the 3575th Pilot Training Group, Vance Air Force Base, Oklahoma. For approximately the last two years the training under the writer's supervision has been exclusively for the AFROTC commissioned officer.

In November 1952 the writer submitted a research paper on a study of initial assignments to specific Air Force Jobs (AFSC'S) as it applied to the AFROTC graduates. One of the findings of that study was that the call to active duty of the AFROTC graduate be made to a specific job as the need for his services arose and not before. At that time the AFROTC graduate was being called to duty and assigned to various and sundry jobs, many of which had very little correlation with his college training. In 1954 it was decided by the Air Force that nearly all of the AFROTC graduates would be required to take pilot training and be utilized as pilots at least for the first year after receiving their pilot rating, and in most cases for several years after being rated. A few exceptions were made for scientists and engineers; however, nearly 98 per cent of the AFROTC students had to agree to take pilot training or were not allowed to continue in the ROTC program and thereby receive their commissions. This procedure assured that the AFROTC graduates were utilized in a specialty for which they were trained.

With the aforementioned objective well in hand, the next logical question of the program was to determine how well the pilot training program was preparing the AFROTC graduate to perform his duties as an airplane pilot in today's tactical aircraft. The problem was, and is, serious because upon this man's

shoulders rests much of the security of the nation. Upon his performance of duty may well rest the survival of the free world. He must be better than anything a potential enemy can offer. He must gain and maintain peak efficiency. We can no longer afford the luxury of getting ready to fight a successful war - we must be ready, and it is the AFROTC pilot graduate who will have to carry the brunt of battle.

PURPOSE

The purpose of this study was to gain information about the AFROTC graduate pilot after completion of his training here at Vance Air Force Base, with specific reference to his present duties, his job success in his present duties, and his job deficiencies in his present duties due to inadequacies in the pilot training program. Further purpose was to provide information on the areas in which the pilot training program needs to be improved.

PROCEDURES

A survey was made to determine if any previous work had been done in this field with none being found. It was then decided that a questionnaire¹ should be sent to graduates of the pilot training program, as well as a questionnaire² to the supervisors of those graduates, to garner the information needed. A sample of graduates of the Vance Air Force Base Pilot Training Program was selected by taking the name of every other officer in the sequence in which they appeared on the orders assigning them to operational units upon graduation. This procedure commenced with Class 56-E, which, with all subsequent classes through 56-Q, is included in the tabulations upon which this report is based.

¹Appendix I

²Appendix II

The names of the officers selected and their last known addresses were then listed and those with identical addresses were grouped. Using this listing, a questionnaire for each graduate and a questionnaire for the present immediate supervisor of each graduate were sent to the Commander of the graduate's organization. It was estimated, on the basis of other surveys previously conducted, that approximately one-half of the questionnaires sent out would be returned. So far, this estimate has proved to be very nearly correct since 50 per cent of the graduate questionnaires were completed and returned and 46 per cent of the supervisor questionnaires were completed and returned in time to be included in this report. This method of selecting the graduates to be surveyed and these percentages of returned questionnaires should assure that the tabulations are a valid and reliable source of information.

The questionnaires were designed to solicit from both the graduate and his immediate supervisor an indication of the frequency with which the graduate performs certain job elements and how well he was trained to perform them. The job elements themselves were taken from the Syllabus of Instruction for Basic Pilot Training, Multi-Engine. The graduate and the supervisor were asked to elaborate when they indicated the graduate's training was deficient in any job elements. In addition to these comments, other comments were obtained by asking general questions relating to the strengths and weaknesses of the graduates.

FINDINGS

Tabulations from the graduate questionnaire were as follows;

A. Number of returned questionnaires - 123

B. Classes surveyed - 56-E through 56-Q

C. Graduates' assignments by Commands:

1. Air training Command 60
2. Military Air Transport Service 21

5. Strategic Air Command	15
4. Tactical Air Command	15
5. Air Defense Command	9
6. Air Material Command	1
7. Northeast Air Command	1
8. USAF in Europe	1

D. Basic Questionnaire

1. Flying and Academics

a. Job elements - percentages. See graduate questionnaire (Appendix I).

b. Comments. The general comments made by the graduates on the flying and academic portions of the pilot training are listed below, with the number of graduates making such comments indicated.

(1) Voice procedures should be stressed more - 4

(2) Students should be required to develop a higher proficiency in VOR, ILS, GCA, and/or low visibility approaches - 45

(3) Students should be required to maintain their proficiency in code while in pilot training - 8

(4) The use of in-flight weather facilities and the importance of pilot weather observations and reporting in-flight weather should be emphasized - 7

(5) More instruction is needed on the functions of Military Flight Service, Air Traffic Control, and flying regulations - 10

(6) More emphasis should be placed on the use of the check list, computing weight and balance, the use of cruise control and/or aircraft clearance forms - 4

(7) Formation flying should be either dropped from the pilot training altogether or allotted more time in the program - 12

(8) The Officer Development Program would be more effective if more student interest could be developed - 2

2. Military and Personal Attributes

a. Elements - percentages. See graduate questionnaire (Appendix I).

b. Comments. The general comments made by the graduates on the military portion of pilot training are listed below, with the number of graduates making such comments indicated.

(1) The Officer Development Program was not effective, especially the physical training portion - 29

(2) More training on the handling of subordinates is needed - 9

(3) More effective speaking and writing course - 11

(4) In the Officer Development Program, emphasize the functions of the units with which a line pilot is likely to come into contact (Operations, Maintenance, etc.) - 13

(5) Treat officer students with more respect - 5

(6) The physical training program is poor - 4

(7) The Officer Development Program was poorly organized and tried to do too much in the time allotted to it - 7

(8) More emphasis should be placed on loyalty to country, devotion to duty, and responsibilities of an officer - 7

(9) Command positions in drills, parades, and ceremonies should be rotated - 4

3. Additional comments of the Graduates

a. Graduates in the numbers indicated felt that the skills best developed or most strengthened in pilot training were:

- (1) Instrument flying - 63
- (2) Overall flying proficiency - 49
- (3) Navigational flights with the necessary radio procedures and knowledge of Air Force Regulations - 14
- (4) Single engine and other emergency procedures - 5
- (5) Formation flying - 3
- (6) Military conduct, tolerance of others, and ability to take orders, especially with respect to co-pilot duties - 8

b. Graduates in the numbers indicated felt that the skills least developed in pilot training were:

- (1) Formation flying - 11
- (2) Officer conduct and responsibilities, military bearing and relationships, and the initiative for self-improvement - 28
- (3) Navigation, flight planning, and strange field landings-
16

- (4) Cruise control and engine instrument interpretation - 5
- (5) Voice procedures and operation of radio equipment - 4
- (6) Knowledge of base functions - 5
- (7) Effective speaking and expression of ideas - 5

c. The additional skills required by present duties for which graduates felt they were not prepared were:

- (1) Effective speaking, knowledge of military forms and how to write military letters - 7

(2) The handling of and relationships with enlisted men - 8

(3) Instrument landing system and VHF omnidirectional range procedures - 10

(4) Flying in actual inclement weather - 2

(5) Teaching and its various aspects as related to flying - 2

d. The following suggestions were made by the graduates:

(1) Revise Officer Training Program, especially physical training - 14

(2) More cross-country flights: Dual - more actual inclement weather time; Solo - more time to increase confidence of student - 14

(3) Give more prestige to officer students - 8

(4) Stress strange field landings - 6

(5) More instrument time (ADF, ILS, GCA, RDF, VOR) - 9

(6) Allow students to leave flight line when not needed for flying or Officer Development Program - 4

(7) More practice on Air Traffic Control clearances - 1

(8) Improve caliber of instructors by having only volunteers as Instructor ^Pilots - 2

(9) Provide students with boom mikes - 2

(10) Better coordination between ground school and flying - 2

Tabulations from the supervisor questionnaire were as follows:

A. Number of returned questionnaires - 113

B. Average time supervisor has held present position - 14 months

C. Average time graduate has been under supervisor - 6 months

D. Average time needed to train graduate before he could perform in his present duties - 6 1/2 weeks

E. Basic Questionnaire

1. Flying and Academics

a. Job elements - percentages. See supervisor questionnaire (Appendix II)

b. Comments. Listed below are the most common statements about the flying and academic portions of pilot training made by the supervisors. The numbers indicate how many supervisors made the same or a similar comment.

(1) If the graduate is to be considered a fully qualified pilot, his training is inadequate; but if the graduate is considered to have only the basic pilot skills, to be implemented by further training, his training in Basic Multi-Engine School is adequate - 5

(2) The graduate's knowledge of radio range and RDF procedures was unsatisfactory - 3

(3) More training time should be devoted to GCA, VOR, and ILS procedures - 9

(4) Graduate performs well as a pilot and is improving with experience - 15

(5) Graduate's knowledge of flying regulations, the functions of Flight Service and the use of publications is poor - 1

(6) If possible, give students more flights in actual inclement weather - 2

(7) Graduate is weak on voice procedures - 2

(8) Graduate's knowledge of code is inadequate - 2

(9) Graduate is not motivated to improve his pilot technique-

4

(10) Students should be taught by instructors who have had

experience in the other Commands of the Air Force, rather than by new flying school graduates - 1

2. Military and Personal Attributes

a. Traits - percentages. See supervisor questionnaire.

(Appendix II)

b. Remarks. The supervisors in the numbers indicated had the following comments to make on the military and personal attributes of the graduates:

(1) Graduate does not realize the importance of neat dress - 1

(2) Graduate's military adeptness is commensurate with his military experience. As he gains in experience, so will he gain in military expertness - 6

(3) Graduate refuses to accept the responsibilities and duties of an Air Force Officer - 3

(4) Graduate has not developed the ability to express himself well, either orally or in writing - 7

(5) Graduate does not have an adequate knowledge of drills, parades, and inspections - 1

(6) An overall lack of knowledge of proper administrative practices and procedures is evident in the performance of this newly graduated pilot - 1

(7) Graduate would have benefited from practical experience rather than formal instruction on operations at squadron and base level - 1

(8) More rigorous physical training is needed - 1

(9) Graduate needs more thorough training on Air Force Organization and Base Organization - 4

(11) The importance of the Air Force mission is not placed in the proper perspective in pilot training - 1

3. General Comments of the Supervisors

a. Graduates' skills best developed in pilot training, as indicated by supervisors:

- (1) Basic flying skills - 46
- (2) Instrument flying capabilities - 22
- (3) Knowledge of aircraft and aircraft systems - 3
- (4) Knowledge of flying regulations, navigation procedures, and/or weather phenomena - 6
- (5) Confidence in his ability as a pilot - 3
- (6) Military training - 5
- (7) Ability to think clearly - 1
- (8) Motivation toward the Air Force - 1
- (9) Ability to work with others - 1

b. Graduates' skills least developed in pilot training, as indicated by supervisors:

- (1) Writing and speaking skills - 5
- (2) Radio procedures - 6
- (3) Instrument techniques, especially VOR, ILS, and low visibility approaches - 11
- (4) The functions of the various units contributing to the operation of a base - 4
- (5) Attitude. Graduate is not willing to accept responsibility and not eager to do the best job of which he is capable - 8
- (6) Command capabilities - 3

(7) Flight planning, clearance forms, weight and balance computation, and/or navigation procedures - 15

(8) Military training and knowledge of Air Force traditions and customs - 4

(9) Formation flying - 3

(10) Administrative work - 4

(11) Judgment and techniques in flying - 3

c. Additional skills required by graduates' present duties which supervisors feel should be taught in pilot training:

(1) Co-pilot duties - 3

(2) VOR, ILS - 4

(3) Code of ethics, customs, courtesies, and Air Force history - 2

(4) International Civil Aviation Organization procedures - 1

(5) Comprehensive coverage of all aircraft forms - 2

(6) Writing and speaking skills - 4

(7) Jet flight planning - 1

(8) Operational concepts of the Air Force - 2

d. Supervisors remarks, criticisms, or suggestions for the pilot training program:

(1) More stress on instruments - 10

(2) ILS and VOR should be taught - 2

(3) A second extended cross country flight would benefit the graduate - 4

(4) Graduate tends to fly mechanically - 1

(5) Improve Officer Responsibility phase of training - 5

- (6) Graduates should receive more weather time in pilot training - 1
- (7) A graduate of high quality - 8
- (8) More thorough training in Air Traffic Control procedures - 3

SUMMARY AND CONCLUSIONS

In summarizing, some significant facts present themselves in the tabulations of this graduate survey.

A. Job Elements - Flying and Academics

1. In almost every job element, the vast majority of both the graduates and supervisors indicate that the graduate's training was adequate.
2. However, there were particular job elements in which significant numbers of both the graduates and the supervisors indicated training was inadequate. These job elements will perhaps bear a little more attention in the training of present and future classes in the Pilot Training Program at Vance Air Force Base.

a. Cruise control

- b. Very high frequency omnidirectional range (the shortage of omnidirectional range equipped aircraft probably precludes much improvement in this area, but perhaps with better utilization of such aircraft, some improvement could be shown)

c. Low visibility approaches

d. Instrument landing system

e. Reporting in-flight weather

B. Job elements - Military and Personal Attributes

1. In this phase of training most graduates and supervisors indicated

that training in the job elements listed was of moderate value.

2. A large number of graduates indicated that their Officer Training was of little value in the following areas:

- a. Accepting responsibility for the failures of one's subordinates
- b. Training one's subordinates
- c. Abiding by the legal codes of conduct, both military and civil.

d. Effective speaking and writing (this course is to be given in Primary Pilot Training beginning with Class 57-I)

e. The conduct of drills, parades, and inspections.

f. Maintaining oneself in good physical condition. (The physical training program has been revised since these officers graduated from the Vance Air Force Base Pilot Training Program)

C. Additional Comments

1. Almost all of the graduates and the supervisors agreed that the graduates acquired the basic flying skills to a satisfactory degree while undergoing pilot training. Most commonly mentioned as best developed skills were:

- a. Overall flying proficiency.
- b. Instrument capabilities.
- c. Navigation and related abilities such as radio procedures, flight planning, and strange field landings.

2. Least developed skills most commonly listed were:

a. Officer conduct and responsibilities, military bearing and relationships, and the initiative for self-improvement.

b. Navigation, flight planning, strange field landings, and clearance forms.

c. Instrument techniques, especially omnidirectional range,

instrument landing system, and low visibility approaches.

5. These last two items in skills least developed appear to contradict those skills mentioned as best developed in pilot training, but one must consider that the various jobs to which the graduates are assigned after graduation would demand different levels of skill in the various job elements. For example, a graduate going to the Air Defense Command conceivably would not be required to perform precise and exacting navigational flights; therefore, the navigational skill he developed in pilot training would be a well developed skill since it met all his needs. On the other hand, a graduate going to the Strategic Air Command conceivably would be required to make precise and exacting navigational flights. Here his pilot training might fall short of giving him the skill he desired, so he would call it one of the least developed skills.

4. A second possible explanation for the apparent contradiction arises from the possibility that here the extremes of the group are reporting. In other words, assuming our graduates are a normally distributed group, properly sampled, we would expect approximately 25 per cent to have developed a rather high proficiency in navigation; approximately 25 per cent to have developed relatively little proficiency in navigation; and the remaining 50 per cent to have been more or less average. Therefore, it is possible to have one extreme of the group stating that navigation (or any other particular skill) is a well developed skill, and the other extreme stating it is a poorly developed skill.

The writer draws the following conclusions:

A. Generally, the pilot training program is preparing the AFROTC graduate pilot to perform his duties in a capable manner as an airplane pilot in today's aircraft.

B. The following areas of weakness are beyond the capability of the pilot training program to correct inasmuch as they are fundamentally the sum total of

each man's background from birth to the present time.

1. Training one's subordinates and accepting responsibility for their success or failure.

2. Abiding by the legal codes of conduct, both military and civil.

3. Effective speaking and writing.

However, the above are not to be deleted from the curriculum inasmuch as some beneficial gain can be expected and no harm should result.

C. The following areas of weakness are within the capability of the pilot training program to improve:

1. The conduct of drills, parades, and inspections.

2. Maintaining oneself in good physical condition.

The value of drills, parades, and inspections has been a bone of contention for many years; however, the military will probably always have them and, beneficial or not, should be properly conducted. The physical training program has been given renewed emphasis and is producing good results and is being well accepted by the students.

D. The least developed flying skills mentioned will probably always appear because of the fact that so long as two or more people are involved in learning motor skills, differences will develop, some high, some low, but all acceptable.

ACKNOWLEDGMENT

The writer wishes to gratefully acknowledge the assistance rendered him by his major instructor, H. Leigh Baker, Professor of Education, Department of Education, Kansas State College of Agriculture and Applied Sciences, without whose aid, guidance, and encouragement this thesis could not have been completed.

APPENDICES

I TRAINING EVALUATION QUESTIONNAIRE

for

GRADUATES OF BASIC MULTI-ENGINE PILOT TRAINING COURSE

Graduate _____ Last _____ First _____ Middle _____ Rank _____ AFSN _____

Graduate of Class _____ Date of Graduation _____

Assigned to _____

Duty Assignments Since Graduating From Pilot Training

Duty _____	Base _____	Months Held _____
_____	_____	_____
_____	_____	_____
_____	_____	_____

The following is a list of job elements, skills, or knowledges in which you have been trained. Please indicate the frequency of use of each of these job elements, skills, or knowledges, and your evaluation of the adequacy of your training on each by placing a check (x) in the proper column. If you feel that your training in any of the job elements, skills, or knowledges was inadequate, please note in the "remarks" section the specific deficiency or deficiencies in your training.

JOB ELEMENT	I have performed this job element at least once within the past month. My training was:		I have performed this job element at least once within the past 3 months, but not within the past month. My training was:		I have not performed this job element within the past 3 months. This training should be:	
	Adequate	Inadequate	Adequate	Inadequate	Continued	Discontinued
I. Flying						
a. Transition						
1. Pre-flight and use of check list	92%		5%		3%	
2. Taxiing	86%		7%		7%	
3. Take-offs	81%		12%		7%	
4. Landings	84%		7%		9%	
5. Go-arounds	77%		14%		9%	
6. Engine failure procedures	68%		17%		15%	
7. Prop Synchronization	76%		4%		18%	2%
b. Navigation						
1. Flight Planning	74%	1%	13%		12%	
2. Pilotage	72%		9%		19%	
3. Dead Reckoning	70%		10%	1%	19%	

JOB ELEMENT	I have performed this job element at least once within the past month. My training was:		I have performed this job element at least once within the past 3 months, but not within the past month. My training was:		I have not performed this job element within the past 3 months. This training should be:
	Adequate	Inadequate	Adequate	Inadequate	
4. Radio Navigation	84%	2%	8%	1%	5%
5. Cruise Control	61%	9%	6%	1%	22%
6. Voice Procedures	84%	4%	5%	1%	6%
c. Instruments 1. Pre-flight procedures	81%	1%	10%		8%
2. IVO	52%		17%		31%
3. Basic Instruments	84%		10%		6%
4. Radio Range	77%		16%		7%
5. RDF	52%		27%	1%	18%
6. ADF	79%		13%	1%	7%
7. VOR	40%	22%	11%	7%	20%
8. Low Approaches	72%	1%	17%		10%
9. Low Visibility Approaches	47%	13%	23%	3%	14%
10. GCA	79%	1%	20%		
11. ILS	43%	12%	22%	2%	21%

JOB ELEMENT	I have performed this job element at least once within the past month. My training was:		I have performed this job element at least once within the past 3 months, but not within the past month. My training was:		I have not performed this job element within the past 3 months. This training should be:
	Adequate	Inadequate	Adequate	Inadequate	
d. Formation					
1. Join-ups and reforms	15%	1%	15%	2%	59% 8%
2. Wing Position	16%	1%	17%	1%	58% 7%
3. Lead Position	14%	1%	17%	1%	59% 8%
4. Cross Under	13%	1%	17%	1%	60% 8%
5. Peel Offs	13%	1%	16%	1%	60% 9%
6. Signals (Visual and oral)	12%	1%	16%	2%	61% 8%
II Academics					
1. Use of Maps and Charts	76%		11%		13%
2. Use of Publications	85%	1%	7%		7%
3. E6B Computer	75%		13%		12%
4. Flight Log	76%		11%		13%
5. Radio Navigation	84%	1%	7%		8%
6. Universal Transverse Mercator Grid System	16%	5%	11%		54% 14%
7. Use of weather facilities	84%	1%	7%	2%	6%

JOB ELEMENT	I have performed this job element at least once within the past month. My training was:		I have performed this job element at least once within the past 3 months, but not within the past month. My training was:		I have not performed this job element within the past 3 months. This training should be:
	Adequate	Inadequate	Adequate	Inadequate	
8. Reporting In-flight Weather	50%	10%	13%	2%	25%
9. Air Force Flying Regulations	81%	6%	6%		7%
10. Aircraft Clearance Forms	81%	6%	4%	1%	8%
11. Air Traffic Control	80%	4%	6%	1%	9%
12. Military Flight Service	70%	4%	11%	1%	14%
13. Celestial Navigation	4%	2%	2%	1%	21%
14. Receiving and Translating Aural Station Identification Codes and Range Signals	82%	2%	7%		9%
15. Receiving and Translating Aural Code other than Station Identification Codes and Range Signals	17%	4%	4%	2%	55%
16. Transmitting Aural Code	6%	2%	1%	2%	38%
17. Receiving and Translating Visual Code	11%	3%	3%	1%	32%
18. Transmitting Visual Code	3%	2%	2%	2%	39%
Remarks:					

The elements listed below are the Military and Personal attributes considered beneficial to an Air Force Officer.

The phrasing of the elements solicits your evaluation of the Officer Training you received in Basic Multi-Engine School. Please indicate by a check (x) in the proper column whether you believe your Officer Training was of "Great Value", "Moderate Value", or "Little Value" in helping you to develop the attributes mentioned. Please also indicate by a check in the proper column your beliefs as to whether or not more thorough training in the elements listed would be of value:

JOB ELEMENTS	Value of Your Training			More Thorough Training Needed	
	Great Value	Moderate Value	Little Value	Yes	No
1. Of what value was Officer Training in assisting you to understand your responsibilities for maintaining high standards of personal character, devotion to duty and loyalty to the mission?	13%	62%	25%	25%	75%
2. Of what value was Officer Training in aiding you to understand the necessity for, and assisting you in:					
a. Subordinating your personal interests to the interests of the mission?	16%	58%	26%	25%	75%
b. Accepting responsibility for the completion of an assigned task?	23%	53%	24%	24%	76%
c. Taking responsibility for the failures of your subordinates?	19%	48%	33%	35%	65%
d. Taking responsibility for self-improvement and readying yourself for more responsible positions?	15%	61%	24%	36%	64%
e. Training your subordinates?	11%	50%	39%	47%	53%
3. Of what value was your Officer Training in aiding you to understand and accept your responsibilities for:					
a. Abiding by the Officers Code of Honor?	23%	49%	28%	36%	64%
b. Abiding by the legal codes of conduct, both military and civil?	21%	49%	30%	20%	80%
c. Treating others fairly?	21%	52%	27%	22%	78%

	Value of Your Training			More Thorough Training Needed	
	Great Value	Moderate Value	Little Value	Yes	No
JOB ELEMENTS					
d. Your personal appearance, community relations, actions of your dependents, meeting financial and other commitments?	29%	47%	24%	22%	78%
4. Of what value was Officer Training in helping you to understand the importance of:					
a. Considering the feelings and opinions of others?	19%	55%	26%	23%	77%
b. Being aware of the abilities, talents and problems of your co-workers?	23%	52%	25%	30%	70%
5. Of what value was Officer Training in giving you a professional knowledge of:					
a. The functions of a typical Base?	24%	61%	15%	35%	65%
b. The functions of the various units operating on a typical Base?	26%	61%	13%	40%	60%
c. Effective speaking and writing?	6%	51%	43%	38%	62%
d. The conduct of drills, parades, and inspections?	7%	54%	39%	22%	78%
6. Of what value was Officer Training in making you aware of the need to, and how to, maintain yourself in good physical condition?	13%	54%	33%	38%	62%

Remarks:

Please give your opinions on the following:

1. Which of your skills or abilities do you feel were best developed or most strengthened in Pilot Training?

2. Which of your skills or abilities do you feel were least developed or strengthened in Pilot Training?

3. List below any additional skills or abilities required by your present duties for which you were not prepared.

4. What remarks or suggestions do you have that might improve Pilot Training?

Completed by:

Signature

Rank

AFSN

Position

Organization

Date

II TRAINING EVALUATION QUESTIONNAIRE

for

PRESENT SUPERVISORS OF GRADUATES OF BASIC MULTI-ENGINE PILOT TRAINING COURSE

Graduate _____ Rank _____ AFSM _____
 Last First Middle
 Graduate of Class _____ Date of Graduation _____
 Assigned to _____

As supervisor of the above named graduate:

I have held my present supervisory position for _____ months.

I have been the immediate supervisor of the above named graduate for _____ months.

The above named graduate's organization of assignment had to perform the following training before the graduate was able to accomplish his assigned duty. If no training was necessary, please so indicate.

Duty	Training Needed	Time required for training
		weeks
		weeks
		weeks
		weeks

The following is a list of job elements, skills, or knowledges in which the Pilot Training Graduates have been trained. Please indicate the frequency with which the previously named graduate performs each of these job elements, skills, or knowledges and your evaluation of the adequacy of his training on each by placing a check (x) in the proper column. If you feel the graduate's training in any of the job elements, skills, or knowledges was inadequate, please note in the "Remarks" section the specific deficiencies in his training.

JOB ELEMENT	Graduate performed this job element at least once within the past month. His training was:		Graduate performed this job element at least once within the past 3 months but not within the past month. His training was:		Graduate has not performed this job element within the past 3 months. This training should be:
	Adequate	Inadequate	Adequate	Inadequate	
I. Flying					
a. Transition					
1. Pre-flight use of checklist	95%	1%	4%		
2. Taxiing	95%	1%	2%		2%
3. Take-offs	91%	1%	6%		1%
4. Landings	90%	2%	6%		2%
5. Go-arounds	89%	1%	7%		1%
6. Engine Failure Procedures	90%	1%	7%		2%
7. Prop Synchronization	84%	2%	6%		6%
b. Navigation					
1. Flight Planning	83%	1%	10%		6%
2. Pilotage	85%	1%	6%		8%

JOB ELEMENT	Graduate performed this job element at least once within the past month. His training was:			Graduate performed this job element at least once within the past 3 months but not within the past month. His training was:			Graduate has not performed this job element within the past 3 months. This training should be:
	Adequate	Inadequate		Adequate	Inadequate		
3. Dead Reckoning	81%	1%		9%			8%
4. Radio Navigation	89%	2%		8%			1%
5. Cruise Control	79%	2%		12%			7%
6. Voice Procedures	91%	3%		6%			
c. Instruments							
1. Pre-flight Procedures	93%	2%		4%			1%
2. ITO	74%	2%		14%			10%
3. Basic Instruments	91%	2%		7%			
4. Radio Range	90%	2%		7%			1%
5. RDF	81%	3%		9%			7%
6. ADF	86%	1%		10%	1%		2%
7. VOR	70%	12%		8%			10%
8. Low Approaches	82%	3%		13%			2%
9. Low visibility Approaches	67%	4%		16%	1%		12%
10. OCA	83%	3%		11%			3%
11. ILS	68%	5%		14%	1%		11%
							1%

JOB ELEMENT	Graduate performed this job element at least once within the past month. His training was:			Graduate performed this job element at least once within the past 3 months but not within the past month. His training was:			Graduate has not performed this job element within the past 3 months. This training should be:
	Adequate	Inadequate		Adequate	Inadequate		
d. Formation							
1. Join-ups and reforms	24%			23%			30%
2. Wing Position	24%			23%			30%
3. Lead Position	18%			20%			40%
4. Cross Under	19%			22%			36%
5. Peel offs	19%			22%			37%
6. Signals (Visual and Oral)	27%			22%			34%
II Academics							
1. Use of maps and charts	86%	1%		10%			3%
2. Use of publications	86%	2%		10%			2%
3. E6B Computer	83%	1%		12%			4%
4. Flight Log	83%	1%		12%	1%		3%
5. Radio Navigation	84%	2%		11%			2%
6. Universal Transverse Mercator Grid System	16%	2%		7%			59%
7. Use of weather facilities	89%	2%		8%			1%
8. Reporting In-flight Weather	82%	4%		6%			8%
9. Air Force Flying Regulations	87%	4%		7%			2%

JOB ELEMENT	Graduate performed this job element at least once within the past month. His training was:		Graduate performed this job element at least once within the past 3 months but not within the past month. His training was:		Graduate has not performed this job element within the past 3 months. This training should be:
	Adequate	Inadequate	Adequate	Inadequate	
10. Aircraft Clearance Forms	89%	3%	7%		2%
11. Air Traffic Control	89%	2%	8%		1%
12. Military Flight Service	81%	7%	9%		5%
13. Celestial Navigation	1%		1%		67%
14. Receiving and Transmitting Aural Station Identification Codes and Range Signals	84%	2%	7%		5%
15. Receiving and Transmitting Aural Codes other than Station Identification Code and Range Signals	30%		4%		50%
16. Transmitting aural code	9%	3%	4%		57%
17. Receiving and Transmitting Visual Code	14%	1%	7%		47%
18. Transmitting Visual Code	7%	2%	4%		50%

Remarks:

The elements listed below are the military and personal attributes considered beneficial to an Air Force Officer. The phrasing of the elements solicits your evaluation of the graduate under consideration on the traits that are listed. Please indicate by a check (x) in the proper column whether you believe his behavior or performance on these items to be "Above Average", "Average", or "Below Average". Please also indicate whether or not you believe more thorough officer training would improve the graduate's behavior or performance. Please evaluate him only in relation to other officers with a comparable amount of training and/or experience. If you do not feel qualified to rate the officer on any trait, please check the column headed "Unknown".

	Below Average	Average	Above Average	Unknown	More thorough Officer Training would benefit this officer	
					Yes	No
1. This graduate understands and accepts his responsibility for:						
a. Maintaining high standards of personal character, devotion to duty and loyalty to the mission.	2%	37%	61%		18%	82%
b. Subordinating his personal interests to the interests of the mission.	3%	57%	40%	5%	11%	84%
c. The completion of assigned tasks		49%	51%	5%	3%	94%
d. The failures of his subordinates		50%	17%	33%	8%	92%
e. Training his subordinates		42%	18%	40%	24%	76%
f. Self-improvement and readying himself for more responsible positions	3%	51%	39%	7%	24%	76%
g. Abiding by the Officers' Code of Honor	1%	36%	59%	4%	6%	94%
h. Abiding by the legal codes of conduct, both military and civil	1%	50%	48%	1%	6%	94%
i. Treating others fairly	1%	46%	53%		3%	97%
j. His personal appearance, community relations, actions of his dependents, meeting financial and other commitments	1%	36%	60%	3%	9%	91%

	Below Average	Average	Above Average	Unknown	More thorough Officer Training would benefit this officer
					Yes No
2. This graduate understands the importance of:					
a. Considering the feelings and opinions of others	1%	62%	37%		100%
b. Being aware of the abilities, talents and problems of his co-workers	1%	74%	18%	7%	99%
3. This graduate has a professional knowledge of:					
a. The functions of a typical base	6%	74%	10%	10%	67%
b. The functions of the various units operating on a typical base	6%	74%	12%	8%	67%
c. Effective speaking and writing	4%	72%	13%	11%	64%
d. How to conduct drills, parades and inspections					
4. This graduate conducts himself in such a way as to maintain himself in good physical condition	3%	30%	6%	61%	67%
Remarks:	1%	62%	36%	1%	100%

Please give your opinions on the following:

1. Which of the graduate's skills or abilities do you feel were best developed in Pilot Training?

2. Which of the graduate's skills or abilities do you feel were least developed in Pilot Training?

3. List below any additional skills or abilities required by the graduate's present duties which you feel should be taught in Pilot Training.

4. What remarks, criticisms, or suggestions for improvement do you have for the Pilot Training Program?

Completed by: _____

Signature

Rank

AFSM

Position

Organization _____

Date _____

III DEFINITION OF ABEREVIATIONS

Listed below, along with their definitions, are the official Air Force abbreviations used in this test. These abbreviations are in common usage throughout the Air Force.

<u>Abbreviation</u>	<u>Definition</u>
ADF	Air direction-finder
AFROTC	Air Force Reserve Officer Training Corps
AFSC	Air Force Specialty Code
AFSN	Air Force service number
CCA	Ground-controlled approach
ILS	Instrument landing system
ITO	Instrument take-off
RDF	Radio direction-finder
ROTC	Reserve Officer Training Corps
USAF	United States Air Force
VHF	Very high frequency (radio range)
VOR	Very high frequency omnidirectional range

DUTY PERFORMANCE BY THE AFROTC GRADUATE
AFTER HE HAS BECOME A RATED PILOT

by

DONALD RAYMOND CONARD
COLONEL U.S.A.F.

B. S., Kansas State College
of Agriculture and Applied Science, 1941

AN ABSTRACT OF A THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Education

KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE

1957

The purpose of this study was to gain information about the AFROTC graduate pilot after completion of his training at Vance Air Force Base, with specific reference to his present duties, his job success in his present duties, and his job deficiencies in his present duties due to inadequacies in the pilot training program. Further purpose was to provide information on the areas in which the pilot training program needs to be improved.

A survey was made to determine if any previous work had been done in this field with none being found. It was then decided that a questionnaire should be sent to graduates of the pilot training program, as well as a questionnaire to the supervisors of those graduates, to garner the information needed. A sample of graduates of the Vance Air Force Base Pilot Training Program was selected by taking the name of every other officer in the sequence in which they appeared on the orders assigning them to operational units upon graduation. This procedure commenced with Class 56-E, which with all subsequent classes through 56-Q, is included in the tabulations upon which this report is based. The names of the officers selected and their last known addresses were then listed and those with identical addresses were grouped. Using this listing, a questionnaire for each graduate and a questionnaire for the present immediate supervisor of each graduate were sent to the commander of the graduate's organization.

In almost every job element, the vast majority of both the graduates and supervisors indicated that the graduate's training was adequate. However, there were particular job elements in which significant numbers of both the graduates and the supervisors indicated training was inadequate. These job elements will bear a little more attention in the training of present and future classes in the pilot training program at Vance Air Force Base.

Most of the graduates and supervisors indicated that the training in the military and personal attributes phase was of moderate value.

Almost all of the graduates and supervisors agreed that the pilot training program developed the basic flying skills to a satisfactory degree.